Abstracts

A K-Band GaAs FET Amplifier with 8.2-W Output Power

J. Goel. "A K-Band GaAs FET Amplifier with 8.2-W Output Power." 1984 Transactions on Microwave Theory and Techniques 32.3 (Mar. 1984 [T-MTT] (Special Issue on Power and Low-Noise GaAs FET Circuits and Applications)): 317-324.

An 8.2-W GaAs FET amplifier with 38.6±0.5-dB gain over a 17.7-19.1 GHz frequency band has been developed. This amplifier combines the outputs of eight multistage amplifier modules utilizing a radial combiner. This state-of-the-art power level has been achieved with AM/PM of less than 2°/dB. The third-order intermodulation products at 1-dB gain compression were 20 dBc, and variation in group delay over the frequency band was less than ±0.25 ns. Tests show that the amplifier is unconditionally stable and follows the graceful degradation principle.

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